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10/565,527	01/23/2006	Nikolai Alekseevich Baranov	48747003	2442

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EXAMINER	
YIP, JACK	

ART UNIT	PAPER NUMBER
3715	

NOTIFICATION DATE	DELIVERY MODE
03/11/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/565,527	BARANOV ET AL.	
	Examiner	Art Unit	
	JACK YIP	3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17,18,20-22 and 24-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17,18,20-22 and 24-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/12/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the amendment filed 10/2/2008; claims 17 - 18, 20 - 22, 24 - 31 are pending; claims 1 - 16, 19, 23 are cancelled.

Claim Objections

2. Claim 23 is objected to because of the following informalities: Applicant expressly states claim 23 is cancelled and combined with claim 17 as new claim 31, however, claim 23 is still listed as "Previously Presented" (See amended claims).

3. Claim 31 is objected to because of the following informalities: a punctuation mark "period" is missing for claim 31.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 17 - 18, 20, 22, 24 - 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Microsoft Flight Simulator Handbook by Jonathan M. Stern (Copyright 1995) (denoted hereinafter as Stern).

Re claim 17:

Stern discloses Flight simulator for training the pilots under wake vortex danger conditions, the flight simulator comprising:

a module (1) for control of the simulator modes is capable of choosing a training scenario (Stern, chapter 15, from pg 336; chapter 17, from pg 372) and controlling operation of the simulator modules (Stern, chapter 2, from pg 44),

a training scenarios database module (2) (Stern, from pg 573)

a module (3) for commutation of the simulator modules (Stern, pg 256, “Communications on Flight Simulator"),

a module (4) for imitation of outside visual situation, visual part of the air space and ground surface in real time (Stern, pg 26 - 27),

a module (6) for simulation of the pilot workplace (Stern, pg 26 - 27),

a module (5) for simulation of the aviation instrument panel with indication of the of aircraft engine modes (Stern, pg 26 - 27),

a module (8) for simulation of the controls for the aircraft units and systems (Stern, pg 26 - 27),

a module (7) for simulation of the ambient parameters (Stern, pg 26 - 27),

a module (9) for simulation of the wake vortex situation is capable of determining the vortex generator wake vortex path as the set of the vorticity region centers (Stern, from pg 283; from pg 298) and intensity on the basis of information from the training scenarios database module (2) and of information from the module (7) for simulation of the ambient parameters (Stern, pg 298 - pg 300; pg 283 - pg 312),

a module (10) for simulation of wake vortex perturbation effects on the aircraft is capable of evaluation of the aircraft additional forces and moments induced by the vortex generator wake vortices on the basis of information on the wake vortex path and intensity received from the module (9) for simulation of the wake vortex situation (Stern, pg 298 - 300), of information on the aircraft parameters received from the training scenarios database module (2), and of information on the aircraft position, flight velocity, angular rates, and geometrical characteristics received from the module (11) for simulation of the aircraft dynamics (Stern, pg 298 - 300; pg 283 - 312; pg 304 - 312),

a module (11) for simulation of the aircraft dynamics is forming signals imitating the aircraft forces and moments according to the training scenario, as well as additional forces and moments induced by the vortex generator wake vortices, and transmitting the signals to the module (6) for simulation of the pilot workplace, module (5) for simulation of the aviation

instrument panel, and module (4) for imitation of outside visual situation on the basis of information from the module (10) for simulation of wake vortex perturbation effects on the aircraft), from the training scenarios database module (2), and from the module (8) for simulation of the controls for the aircraft units and systems (Stern, pg 298 - 300; pg 283 - 312; pg 304 - 312;),

a system for evaluation of the pilot actions is capable of estimating correctness of the pilot actions against the flight situation hazardous for the aircraft on the basis of information received from the module (4) for imitation of outside visual situation and the module (5) for simulation of the instrument panel (Stern, pg 153, “Select Course Tracking, Select Record Course and Display Course”; from pg 507, "Practice").

Re claim 18:

Stern discloses the simulator as claimed in claim 17 wherein said module (6) for simulation of the pilot workplace is made with a possibility of changing its attitude and is equipped with the device for dynamic imitation of flight (Stern, from pg 26, “Visual Flight”).

Re claim 20:

Stern discloses the simulator as claimed in claim 17 wherein it additionally comprises a module for simulation of noise, optical and dynamic effects (Stern, from pg 26, “Visual Flight”, pg 139, “sound of the slowing airflow…”).

Re claim 22:

Stern discloses the simulator as claimed in claim 17 wherein it is implemented in the software of the simulator modules of the operation of the simulator's modules and said module (7) for simulation of the danger area parameters comprises the database of characteristics of wake vortex danger areas for different types of vortex generators (Stern, pg 298 - 300; pg 283 - 312; pg 304 - 312).

Re claim 24:

Stern discloses a flight simulator for training in pilotage under the conditions when the pilot receives information on the forecasted possibility of the aircraft encounter with the vortex generator wake vortex danger area and additionally, the flight simulator comprising: ()

a module (1) for control of the simulator modes is capable of choosing a training scenario (Stern, chapter 15, from pg 336; chapter 17, from pg 372) and controlling operation of the simulator modules (Stern, chapter 2, from pg 44),

a training scenarios database module (2) (Stern, from pg 573)

a module (3) for commutation of the simulator modules (Stern, pg 256, “Communications on Flight Simulator"),

a module (4) for imitation of outside visual situation, visual part of the air space and ground surface in real time (Stern, pg 26 - 27),

a module (6) for simulation of the pilot workplace (Stern, pg 26 - 27),

a module (5) for simulation of the aviation instrument panel with indication of the of aircraft engine modes (Stern, pg 26 - 27),

a module (8) for simulation of the controls for the aircraft units and systems (Stern, pg 26 - 27),

a module (7) for simulation of the ambient parameters (Stern, pg 26 - 27),

a module (9) for simulation of the wake vortex situation is capable of determining the vortex generator wake vortex path as the set of the vorticity region centers and intensity on the basis of information from the training scenarios database module (2) and of information from the module (7) for simulation of the ambient parameters (Stern, pg 298 - pg 300; pg 283 - pg 312),

a module (10) for simulation of wake vortex perturbation effects on the aircraft is capable of evaluation of the aircraft additional forces and moments induced by the vortex generator wake vortices on the basis of information on the wake vortex path and intensity received from the module (9) for simulation of the wake vortex situation, of information on the aircraft parameters received from the training scenarios database module (2), and of information on the aircraft

position, flight velocity, angular rates, and geometrical characteristics received from the module (11) for simulation of the aircraft dynamics (Stern, pg 298 - 300; pg 283 - 312; pg 304 - 312),

a module (11) for simulation of the aircraft dynamics is capable of forming signals imitating the aircraft forces and moments according to the training scenario, as well as additional forces and moments induced by the vortex generator wake vortices, and transmitting the signals to the module (6) for simulation of the pilot workplace, module (5) for simulation of the aviation instrument panel, and module (4) for imitation of outside visual situation on the basis of information from the module (10) for simulation of wake vortex perturbation effects on the aircraft, from the training scenarios database module (2), and from the module (8) for simulation of the controls for the aircraft units and systems (Stern, pg 298 - 300; pg 283 - 312; pg 304 - 312;),

a system for evaluation of the pilot actions is capable of estimating correctness of the pilot actions against the flight situation hazardous for the aircraft on the basis of information received from the module (4) for imitation of outside visual situation and the module (5) for simulation of the instrument panel (Stern, from pg 507, "Practice"),

a module (17) of parameters of the vortex perturbation danger area comprising:

a unit (20) for evaluation of perturbation hazard is capable of estimating the perturbation hazard level at the given point according to the chosen hazard criteria for the aircraft additional aerodynamic forces and moments induced by the vortex perturbations on the basis of information received from unit (16) for determination of the forces and moments, which belongs to the module (10) for simulation of wake vortex perturbation effects on the aircraft (Stern, pg 298 - 300, Table 13.1 Classifications of Turbulence, “Flight Simulator Setting Reaction Inside Aircraft"; pg 283 - 312; pg 304 - 312);

a unit (21) for determination of danger points where the additional forces and moments induced by the vortex perturbations are dangerous (Stern, pg 298 - 300, Table 13.1 Classifications of Turbulence, “Flight Simulator Setting Reaction Inside Aircraft"; pg 283 - 312; pg 304 - 312); the unit is capable of determining the coordinates of points belonging to the danger area according the hazard criteria based on information received

from the unit (20) for evaluation of perturbation hazard (Stern, pg 298 - 300, fig 13.7; fig 13.5, "Strong Downdraft"; 13.6, "Wind Shear Turbulence"…);

a unit (22) for determination of the vortex perturbation danger area is capable of calculating the danger area geometrical characteristics on the basis of information received from the unit (21) for determination of danger points and transmitting the corresponding information; and a warning module (18) comprising (Stern, pg 283 - 312; from pg 80, "Instruments"; from pg 417, "Instrument Approach Procedure"):

a unit (23) for selection of the delay time is capable of calculating the time period within which the aircraft has at least a possibility of a flight evasive maneuver providing evasion of the aircraft from the generator wake danger area after the signal warning against the possibility of wake encounter has been received (Stern, pg 343 - 344, "Weather Briefing"; from pg 315, "Enroute Charts");

a unit (24) for simulation of the control plane is capable of calculating the delay distance, which equals to the distance covered by the aircraft during the delay time, modeling the control plane situated in front of the aircraft perpendicular to its flight direction at the delay distance, and determining the forecasted time necessary for the aircraft to gain the control plane in the inertial frame (Stern, pg 343 - 344, "Weather Briefing"; from pg 315, "Enroute Charts");

a forecasting unit (25) is capable of determining the generator wake path in the form of the set of the generator vorticity region centers with respect to the inertial frame (Stern, pg 310, "…select Winds Aloft or Surface Winds. Winds aloft are programmed in Flight Simulator (and forecast by meteorologists)…"; pg 336 - 337, "Weather reports and forecasts") and of the intensity of the generator wake vortices at the forecasted time on the basis of information from the unit for simulation of wake vortices in the module for simulation of vortex situation (Stern, pg 298 - 300);

a unit (26) for calculation of the intersection points is capable of determining the coordinates of the intersection points of the generator wake vortex trajectory and the

control plane at the forecasted time of the aircraft flight through it (Stern, pg 293 - 300; pg 283 - 312; pg 304 - 312);

an areas and regions forming unit (27) is capable of forming around the intersection point of the wake vortex path (Stern, pg 293 - 300) and the control plane of the wake vortex danger area in the form of the set of the generator vorticity danger areas (Stern, pg 304 - 312), where the entering aircraft may have the flight parameters exceeding the admissible limits; forming in the control plane of the area of the aircraft forecasted positions at the forecasted time of the aircraft intersection with the control plane with due regard to the flight regulations; forming around the region of the aircraft forecasted positions of the alert area (Stern, pg 293 - 300); the information on the entrance of the wake danger areas into the alert area will be provided to the user (Stern, Stern, pg 310; pg 336 - 337);

a transformation unit (28) is capable of calculating the coordinates of the area of the aircraft forecasted positions, of the alert area and of the wake vortex danger area in the aircraft frame (Stern, pg 310; pg 336 - 337; pg 293 - 300);

first intersection conditional test unit (29) is capable of calculating the distance from the alert area to the wake vortex danger area and marking its nulling (Stern, pg 293 - 300; pg 304 - 312);

second intersection conditional test unit (30) is capable of calculating the distance from the area of the aircraft forecasted positions to the wake vortex danger area and marking its nulling (Stern, pg 310; pg 336 - 337);

an indication unit (31) containing at least one indication device is capable of indicating the nulling of the distance from the alert area to the generator wake vortex danger area (Stern, pg 310, pg 336 - 337, “Weather report and forecast”, pg 293 - 300, fig 13.5, ”Encountering a microburst during takeoff can lead to disaster,.. typically 1-2 miles");

an emergency indication unit (32) containing at least one indication device is capable of indicating the nulling of the distance from the area of the aircraft forecasted

positions to the danger area of the generator wake vortices and said indication device is capable of indicating the nulling of the distance from the alert area to the generator wake vortex danger area (pg 311 - 312, “Type a number of miles in the Transition box to control the distance in which the weather in the newly defined area will transition to the global weather…”)

and said indication device capable of indicating the nulling of the distance from the area of the aircraft forecasted positions to the danger area of the generator wake vortices are chosen from the group containing devices of visual, audio and tactile indication (Stern, from pg 26, “Visual Flight”, pg 139, “sound of the slowing airflow…”),

a module for simulation of noise, optical and dynamic effects (Stern, from pg 26, “Visual Flight”, pg 139, “sound of the slowing airflow…”),

a module of visualization including a visualization device is capable of forming the image at least of the area of the aircraft forecasted positions and wake vortex danger areas on the basis of information received from the warning module (Stern, pg 343 - 344, “Weather Briefing”; from pg 315, “Enroute Charts”),

a system for evaluation of the pilot actions is capable of estimating correctness of the pilot actions against the flight situation hazardous for the aircraft on the basis of information received from the module (4) for imitation of outside visual situation and the module (5) for simulation of the instrument panel (Stern, from pg 507, "Practice").

Re claim 25:

Stern discloses the simulator as claimed in claim 24 wherein said unit (23) for selection of the delay time can perform the current correction of the delay time in a manual or semiautomatic or automatic mode (Stern, pg 343 - 344, “Weather Briefing”; from pg 315, “Enroute Charts”), said unit (27) is developed with a possibility of performing the current correction of the coordinates of the alert area and area of the aircraft forecasted positions in a manual or semiautomatic or automatic mode, said unit (22) for determination of the danger area parameters could be

designed with a possibility of approximating the boundaries of the vortex generator wake vortex danger area (Stern, pg 343 - 344, “Weather Briefing”; from pg 315, “Enroute Charts”; pg 298 - 312).

Re claim 26:

Stern discloses the simulator as claimed in claim 24 wherein the aircraft admissible roll moment induced by wake vortices is chosen as the hazard criterion (Stern, pg 283 - 312).

Re claim 27:

Stern discloses the simulator as claimed in claim 24 wherein the admissible value of the aircraft roll angle is chosen as the hazard criterion (Stern, pg 298 - 300).

Re claim 28:

Stern discloses the simulator as claimed in claim 24 wherein it is implemented in the software of the simulator modules of the operation of the simulator's modules and said module (7) for simulation of the danger area parameters comprises the database of characteristics of wake vortex danger areas for different types of vortex generators (Stern, pg 293 - 300).

Re claim 29:

Stern discloses the simulator as claimed in claim 24 wherein said system (12) for estimation of the pilot actions comprises a memory device for saving information on the coordinates of the control plane (Stern, pg 153, “3. Select Record Course and Display Course”), area of the aircraft forecasted positions and wake vortex danger areas of vortex generators located in the aircraft vicinity at least within the time of emergency indication of the nulling event for the distance from the area of the aircraft forecasted positions to the danger area of the vortex generator wake vortices (Stern, pg 343 - 344, “Weather Briefing”; from pg 315, “Enroute Charts”; pg 298 - 312).

Re claim 30:

Stern discloses flight simulator for training the pilots under wake vortex danger conditions, the flight simulator comprising:

a module (1) for control of the simulator modes is capable of choosing a training scenario and controlling operation of the simulator modules,

a training scenarios database module (2)

a module (3) for commutation of the simulator modules,

a module (4) for imitation of outside visual situation, visual part of the air space and ground surface in real time,

a module (6) for simulation of the pilot workplace,

a module (5) for simulation of the aviation instrument panel with indication of the of aircraft engine modes,

a module (8) for simulation of the controls for the aircraft units and systems,

a module (7) for simulation of the ambient parameters,

a module (9) for simulation of the wake vortex situation is capable of determining the vortex generator wake vortex path as the set of the vorticity region centers and intensity on the basis of information from the training scenarios database module (2) and of information from the module (7) for simulation of the ambient parameters,

a module (10) for simulation of wake vortex perturbation effects on the aircraft is capable of evaluation of the aircraft additional forces and moments induced by the vortex generator wake vortices on the basis of information on the wake vortex path and intensity received from the module (9) for simulation of the wake vortex situation, of information on the aircraft parameters received from the training scenarios database module (2), and of information on the aircraft position, flight velocity, angular rates, and geometrical characteristics received from the module (11) for simulation of the aircraft dynamics,

a module (11) for simulation of the aircraft dynamics is forming signals imitating the aircraft forces and moments according to the training scenario, as well as additional forces and moments induced by the vortex generator wake vortices, and transmitting the signals to the module (6) for simulation of the pilot workplace, module (5) for simulation of the aviation

instrument panel, and module (4) for imitation of outside visual situation on the basis of information from the module (10) for simulation of wake vortex perturbation effects on the aircraft, from the training scenarios database module (2), and from the module (8) for simulation of the controls for the aircraft units and systems,

a system for evaluation of the pilot actions is capable of estimating correctness of the pilot actions against the flight situation hazardous for the aircraft on the basis of information received from the module (4) for imitation of outside visual situation and the module (5) for simulation of the instrument panel; (See Claim 17 rejection above)

a unit (13) for simulation of vortex generator dynamics including the vortex generator tracker is capable of receiving information on the vortex generator position, motion parameters, geometrical and weight characteristics from the scenarios database module (2) (Stern, pg 293 - 300; pg 303 - 312, “Weather Setting”) and the memory unit is capable of storing information on the vortex generator position and motion parameters (Stern, from pg 573; pg 303 - 312);

a unit (14) for simulation of wake vortices including the wake vortex tracker is capable of determining the vortex generator wake vortex path in the form of the set of the vorticity region center trajectories and intensity on the basis of information from the module (7) for simulation of the ambient parameters and module (13) for simulation of vortex generator dynamics and also is capable of saving the information on the coordinates of points of the vortex generator wake vortex path in the form of the set of the vorticity region center trajectories and intensity (Stern, pg 293 - 300; pg 303 - 312, “Weather Setting”);

and said module (10) for simulation of wake vortex perturbation effects on the aircraft should comprise (Stern, pg 298 - 300):

a unit (15) for the aircraft schematization is capable of calculating the set of the aircraft geometrical characteristics necessary for calculation of the aircraft additional aerodynamic forces and moments induced by the vortex generator wake vortices on the basis of information on the aircraft type and configuration the training scenario database module (2), and (Stern, pg 298 - 300; pg 283 - 312; pg 70 - 71)

a unit (16) for determination of the above mentioned forces and moments on the basis of the information on the coordinates of points of the vortex generator wake vortex path in the form of the set of the vorticity region center trajectories and intensity saved by the unit (14) for simulation of wake vortices and of information on the aircraft position, flight velocity, angular rates, and geometrical characteristics received from the module (11) for simulation of the aircraft dynamics (Stern, pg 298 - 300; pg 283 - 312; pg 70 - 71).

Re claim 31

Stern discloses flight simulator for training the pilots under wake vortex danger conditions, the flight simulator comprising:

a module (1) for control of the simulator modes is capable of choosing a training scenario and controlling operation of the simulator modules,

a training scenarios database module (2)

a module (3) for commutation of the simulator modules,

a module (4) for imitation of outside visual situation, visual part of the air space and ground surface in real time,

a module (6) for simulation of the pilot workplace,

a module (5) for simulation of the aviation instrument panel with indication of the of aircraft engine modes,

a module (8) for simulation of the controls for the aircraft units and systems, a module (7) for simulation of the ambient parameters,

a module (9) for simulation of the wake vortex situation is capable of determining the vortex generator wake vortex path as the set of the vorticity region centers and intensity on the basis of information from the training scenarios database module (2) and of information from the module (7) for simulation of the ambient parameters,

a module (10) for simulation of wake vortex perturbation effects on the aircraft is capable of evaluation of the aircraft additional forces and moments induced by the vortex generator wake vortices on the basis of information on the wake vortex path and intensity received from the

module (9) for simulation of the wake vortex situation, of information on the aircraft parameters received from the training scenarios database module (2), and of information on the aircraft position, flight velocity, angular rates, and geometrical characteristics received from the module (11) for simulation of the aircraft dynamics,

a module (11) for simulation of the aircraft dynamics is capable of forming signals imitating the aircraft forces and moments according to the training scenario, as well as additional forces and moments induced by the vortex generator wake vortices, and transmitting the signals to the module (6) for simulation of the pilot workplace, module (5) for simulation of the aviation instrument panel, and module (4) for imitation of outside visual situation on the basis of information from the module (10) for simulation of wake vortex perturbation effects on the aircraft, from the training scenarios database module (2), and from the module (8) for simulation of the controls for the aircraft units and systems, and

a system for evaluation of the pilot actions is capable of estimating correctness of the pilot actions against the flight situation hazardous for the aircraft on the basis of information received from the module (4) for imitation of outside visual situation and the module (5) for simulation of the instrument panel (See Claim 17 rejection),

wherein said system (12) for estimation of the pilot actions comprises a memory device for saving information on the coordinates of the control plane, area of the aircraft forecasted positions and wake vortex danger areas of vortex generators located in the aircraft vicinity at least within the time of emergency indication of the nulling event for the distance from the area of the aircraft forecasted positions to the danger area of the vortex generator wake (Stern, pg 153, “Select Course Tracking, Select Record Course and Display Course”; from pg 507, "Practice"; pg 283 - 312; pg 343 - 344, “Weather Briefing”; from pg 315, “Enroute Charts”).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over "Microsoft Flight Simulator Handbook" by Jonathan M. Stern (Copyright 1995) (denoted hereinafter as Stern) in view of "Jet Fighter School II: More Training for Computer Fighter Pilots" by Richard G. Sheffield (Copyright 1988) (denoted hereinafter as Sheffield) and "Runway USA: A pilot's guide to destination cities in Flight Simulator" by Charles Gulick (Copyright 1987) (denoted hereinafter as Gulick).

Re claim 21:

Stern discloses the simulator as claimed in claim 17 wherein said training scenarios are chosen from the group including takeoff and landing at a ground airdrome (Stern, from pg 26, "Visual Flight"). But Stern does not disclose takeoff and landing at the aircraft carrier, individual and formation flight, and flight refueling. However, Sheffield teaches Stern's deficiency (Sheffield, from pg 154, "Carrier Takeoffs"; from pg 87, "Two-Plane Aerobatics and Maneuvers") and Gulick teaches flight refueling (Gulick, pg 37 - 38, "in-flight refueling"). Therefore, in view of Sheffield and Gulick, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the simulator described in Stern, by providing the military aircraft training scenarios taught by Sheffield and Gulick, since such modifications enhancing the capability of Stern for training fighter jet pilot.

Response to Arguments

8. Applicant's arguments with respect to claim(s) 17 - 18, 20 - 22, 24 - 31 have been considered but are moot in view of the new ground(s) of rejection. Therefore, the instant office action has been made non-final. And all previously allowable subject matters and have been withdrawn.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aviation Weather For Pilots and Flight Operations Personnel by Department Of Transportation (Revised 1975)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACK YIP whose telephone number is (571)270-5048. The examiner can normally be reached on Monday - Friday 9:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571)272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. Y./
Examiner, Art Unit 3715

/XUAN M. THAI/

Supervisory Patent Examiner, Art Unit 3715